

**FIRST RECORD OF THE SPIDER GENUS  
*Orchestina* SIMON, 1882  
(ARACHNIDA, ARANEAE, OONOPIDAE) FROM INDIA**

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**ABSTRACT**

The Spider genus *Orchestina* Simon, 1882 is the first record from the family Oonopidae in India. Its basic diagnostic characteristics, image of its pedipalp and general ecological information are presented.

**Key words:** - - Oonopidae, *Orchestina*, Solapur, Maharashtra, India

**INTRODUCTION**

The Oonopidae (goblin spiders) are small to very small haplogyne, ecribellate, six-eyed spiders whose greatest diversity occurs in tropical regions (Jocque and Dippenaar-Schoeman, 2006). More than 1016 species belonging to 88 genera are known from family Oonopidae (Platnick, 2012). Oonopidae are worldwide in distribution. The Oonopid genera *Orchestina* have been found to be common as more than 43 species have been described till now (World Spider Catalogue 2012) from various countries. The Indian Oonopidae fauna has been scarcely studied and as of today only 13 species belonging to 04 genera are known (Siliwal *et al.* 2005). The preferred habitat of these species is leaf litter and humus, although investigations have shown their presence in rain forest canopy (Sørensen, 2004)). We present herewith first record of Oonopid genera *Orchestina* from Solapur district, Maharashtra, India. The generic characters of the specimens belonging to this genus are recorded and the general habitat features are noted.

**MATERIAL AND METHODOLOGY**

The present study is based on specimens collected from the Southern Tropical thorn Forest habitat patches around Solapur, Maharashtra ( $17^{\circ}36'50.14''N$  and  $75^{\circ}53'01.32''E$ ). The region lies in Biogeographic Zone 6 (Deccan peninsula), Province 6B (Chhota Nagpur) in India (Rodgers *et al* 2002). The plateau is at an average elevation of 470 m above sea level. The soil type in this area is predominantly laterite and black volcanic, basaltic type. The terrain

shows general undulating pattern with hills having gentle slopes. The average temperatures vary between 15°C in winter to 44°C in summer. The average rainfall in this region is between 600-635 mm, with humidity averaging at 60%. The vegetation of the area is classified as Type 6 -Tropical Thorn Forest, Subgroup 6A/C1 – Southern Tropical Thorn Forest (Champion and Seth 1968). The region is dominated with *Acacia*, *Mimosae* sps. and *Zizyphus* sps. The canopy height averages between 6 m to 12 m. The region has extensive patches of grassland with intervening bare grounds covered with exposed rocks and stones.

A total of 05 females and 03 males were collected in a study spanning approximately one year from July 2011 to August 2012. All specimens were collected from leaf litter through active searching. The specimens were preserved in 70% ethanol and identified with by means of stereomicroscope. The necessary images for generic level studies were taken with the aid of digital camera Nikon L24. All measurements are in approximate millimeters made with the help of glass slide marked with graph paper. 02 male specimens were examined for noting generic characteristics. The voucher specimens examined for this study are currently deposited in the Zoology Department, Walchand College of Arts and Science, Solapur and further studies pertaining to their status as novel species are in progress.

#### **Diagnosis of Generic Characters: -**

*Orchestina*, like other Oonopid species are small and our specimen measured approximately 1.4 mm. The cephalothorax is yellowish brown with thin purplish streaks along sides and radiating from apex. Abdomen is covered with soft cuticle and is without hard dorsal abdominal scuta. Posterior Median Eyes (PME) are moved far forward between Anterior Lateral Eye (ALE) thus making an anterior row of four eyes (H-shaped, transverse eye arrangement). Posterior median eyes are largest. The enlarged and swollen femur of leg IV is distinctive. Leg formula is 2,1,4,3. The male palpal tibiae are swollen and the heavily sclerotized, thick walled sperm duct within the bulb is clearly visible (Fig.1-4).

#### **Distribution: -**

The specimens were collected from sites ranging from bare ground covered with minimum grass, long stretches of grassland patches, and also from protected forest patches with high density of shrubs and trees. Most of the specimens were found between July-November.

#### **Management and conservation: -**

The grassland ecosystem has been under constant pressure since last century or more due to habitat loss and much of the original grassland and thorn forest areas are converted into small fragments. It has been well documented that spiders play significant role in insect dynamics at all trophic levels. Our recent investigation has proved that grassland habitat of this area supports spiders from more than 31 families (Hippargi et al. 2011). The habitat needs proper management for better protection of these creatures in future.

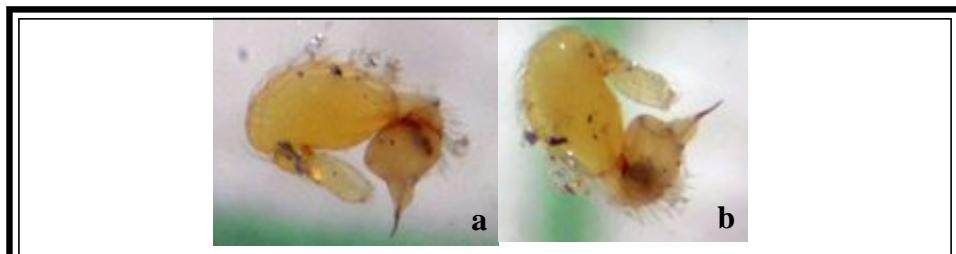


Fig. 01: - Male palp - (a) prolateral and (b) retrolateral view

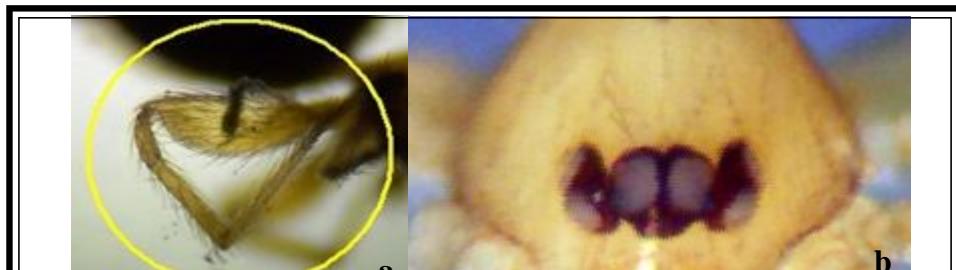


Fig.2: - (a) Swollen femur of leg IV and (b) Eye arrangement

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